The Naval Hospital Great Lakes, IL Occupational Health & Preventive Medicine Department & Its Activities

Naval Environmental Health Center
Conference 2005

Speaker: Jesse Monestersky, DO, MS, MPH, DTM&H
CAPT, MC, USNR (FS, HMO)

Speaker

- **Current tour:**
  - Position:
    - NavHosp Great Lakes PrevMedOfcr/Clinical Epidemiologist
  - Tour:
    - 5/04-5/07

© 1986 Universal Press Syndicate
THE DOCTOR SPECIALIZES IN PREVENTIVE MEDICINE... SO IF YOU'RE ALREADY SICK, HE'S NOT INTERESTED.
CAPT Monestersky USN
5-6

Enabling Objectives

- To acquire an understanding of unique aspects of Navy boot camp medicine.
- To become familiar with OH/PMD programs at NHGL & its missions.
- To become acquainted with the OH/PMD weekly recruit & student surveillance report.

Recruit & Student Focus

- NHGL *raison d'être* - **recruits & students**.
- Recruit's 1st exposure to Navy Medicine.
- Largely adolescent or collegiate medicine.

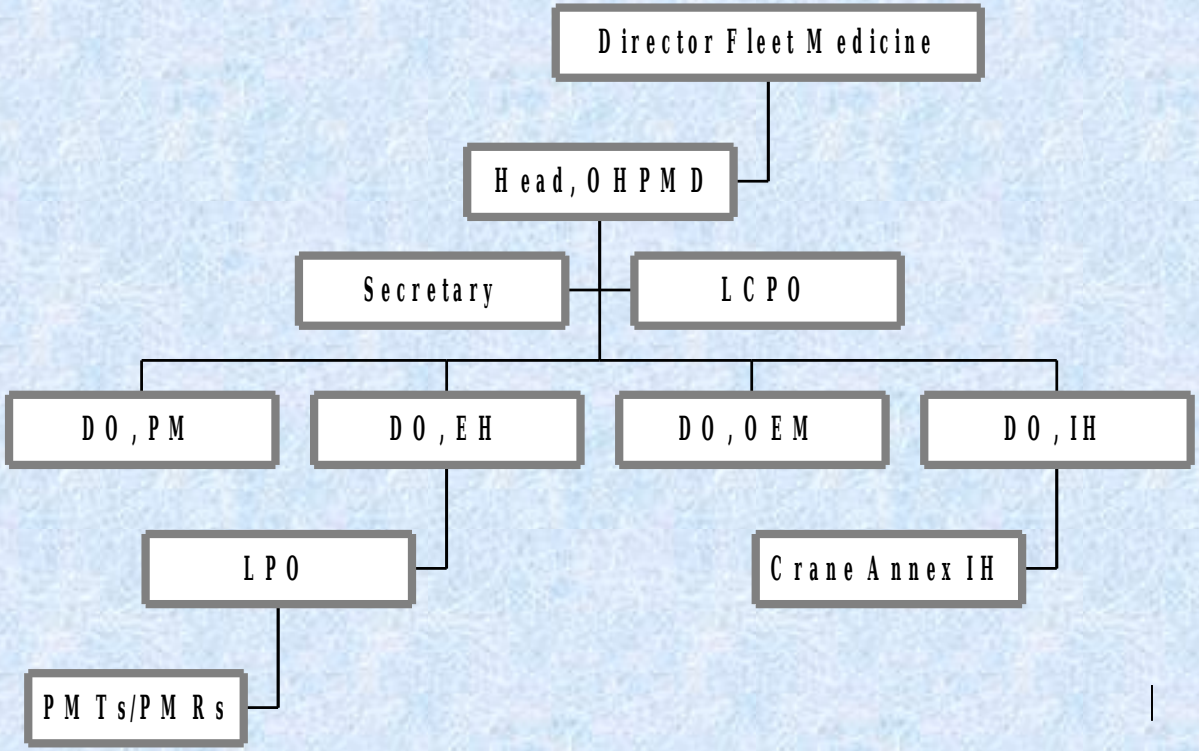
Occupational Health/Preventive Medicine Department & Divisions

(OH/PMD)

Occupational Health & Preventive Medicine

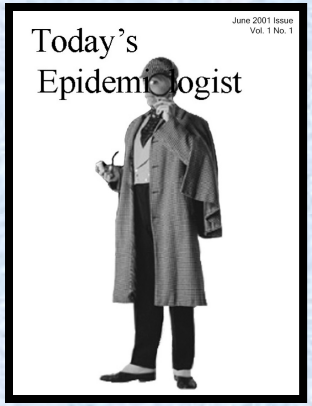
- Located within Fleet Medicine Directorate at Fisher Branch Health Clinic (bldg 237).
- Divisions within department
  - OEM (CS)
  - EHO (uniform)
  - PM (uniform)
  - IH (CS)

OH/PMD Wiring Diagram



PMO/Clinical Epi

- DivO PrevMed
- Personnel: 1 PMO/Epi, 3 HMs
- Duties:
  - Weekly recruit & student surveillance report
  - TB surveillance
  - Communicable diseases staff resource
  - Travel Medicine
  - Outbreak investigation
- Specific program manager:
  - AVIP, SVP, Influenza, IDC, Immunizations
- Committees:
  - IRB, ICC, Bioethics, Student Health TF, Recruit Health TF, Lake County bioterrorism, Emergency Mgt Action Committee (ad hoc)



Environmental Health

- DivO EH
- Personnel:
  - All military; 1 EHO; 5 PMTs; 5 PMRs
- Routine & special inspections.
- Immunization manager for a # of programs.
- Recruit TST program.
- STI contact investigation.
- CD reporting.
- Committees:
  - ICC, Rabies Control, Ass't EMO
- Contracted out:
  - Pests (rodents, insects), beach water testing

IH

- NHGL IH DivO
- NHGL personnel:
  - NHGL: CA/MEO; all GS; mix of IH's & IH techs, with secretary
- Crane Annex at Naval Surface Warfare Ctr (Crane IN) personnel (administratively under OH/PMD Dept Head): CS
- Diverse populations served: 13-state region
- Activities:
  - Surveys
  - Investigations
  - Training: e.g., asbestos, Pb, respiratory protection, heat stress, Hg, anesthetic gases
  - Committees: Environmental Council; Asbestos Program, Lead Control; Hazardous Materials Control & Mgt, Emergency Mgt

OEM

- OEM DivO
- CA/MEO
- Personnel:
  - GS: civilian physician, OHN, OH techs
  - Military: OEM physician
- Activities:
  - Acute illness & injury, needle stick, TST
  - Physical exam programs:
    - Medical screening & certification exams
    - Medical surveillance programs
- Committees:
  - FECA W/C
- Interface with Safety, IH

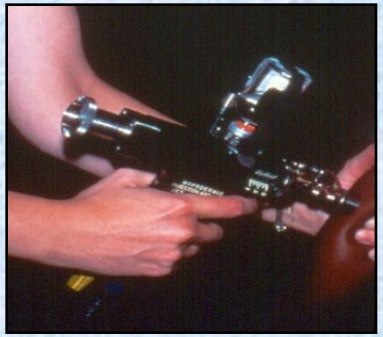
Recruit & Student Medicine

Recruit Health

- RTC GL is Navy's only recruit training depot in US.
- BMC 1523 (USS Red Rover) medically in-process ~54,000 new Navy recruits/yr; ~15% women.
- Practice *Total Navy Recruit Health*.
- Navy Medicine an integral part of recruit training experience.
- Since 7/04 accelerated recruit training (↓from 8 to 7wks); preceded by 1wk of in-processing.
- BMC 1007 (USS Tranquillity) & Ship's Sick Call clinic provides routine sick call to recruits.
- BMC 1007 has *SMART* (Sports Medicine Assessment & Rehabilitation Team).

Recruit Vaccinations

- **<u>P-5 day</u>:**
  - Twinrix (Hep A/B)
  - Tetanus
  - MMR
  - Flumist
  - IPV
    Mening
  - Varicella#1 (if non-immune)
  - Bicillin or erythromycin
- **<u>Week 5, Day 2</u>:**
  - Twinrix (Hep A/B)#2
  - Yellow Fever
  - Varicella#2



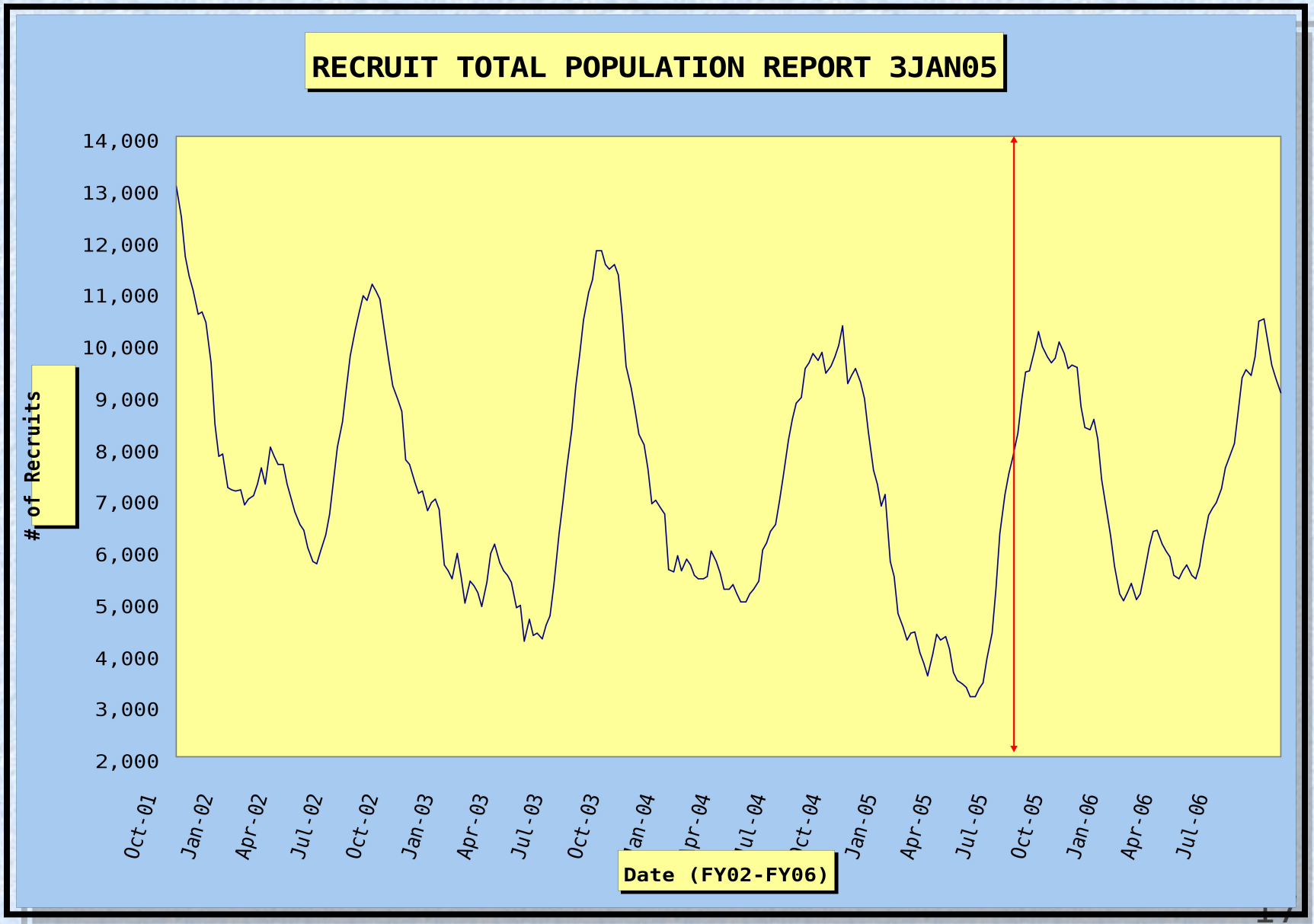
Recruit Training Command

- In-processing a very busy week.
- Boot camp curriculum allows for little down time.
- Training overseen by RDCs (Recruit Division Cdrs).
- Near end of basic training, final 1d eval, “Battle Stations.”
- ~80% continue to "A" Schools located at TSC (Training Support Cmd), remainder go to assignments aboard ships or shore installations.

Recruits

- Accessions enter military service in healthy condition.
- Main objectives:
  - Assuring a force of healthy members at reasonable cost.
  - Capable of completing initial training.
  - Capable of maintaining worldwide deployability.

Recruit Accessions



Recruit & Student Commands Served

- Commands:
  - RTC (Recruit Training Command)
  - TSC (Training Support Command)
  - NHCS (Naval Hospital Corps School)
- Medical care provided by:
  - Hospital, with its branch health clinics (inc., medical & dental)

Navy Medicine Promises

- Recruits will be comprehensively evaluated, to ensure that they are physically prepared to accomplish their future complex, sometimes dangerous missions.
- During their careers, whether for injury or illness, sailors will have the best possible healthcare.

Today's Recruits

- Physical fitness on entry
- Psychosocial preparedness
  - Self-esteem
  - Family stability
  - Cultural impact – sex, drugs, alcohol
  - Structured environment
- Expectations about military service
- Place of origin

Cost of Illness & Injury

- Each day in training costs time & money
- >5 days of medical down time = lost training days, which causes roll back, at substantial financial cost to USG
- Even if recruits rolled back, new recruits continue to enter training pipeline.

PrevMed

- **Military's readiness is linked to the well-being of its people.**
- **Force health protection begins during *boot camp*.**
- **OH/PMD key role for both recruit & student populations, as well as staff & beneficiaries.**

Factors of Boot Camp & Medical Consequences

- **Crowding:**
  - Open bay berthing.
  - Large lecture halls.
- **Training injuries.**
- **Vaccinations** are many & closely spaced.
- **High background** rate of adenovirus & FRIs.

Unique Aspects of Recruit Population

- X-section of recruits (across US & world).
- After arrival a closed population.
- Great public sensitivity.
- High mental & physical demands.
- Trainees often push through illness/injury.
- Health ed competes with tight curriculum.

Characteristics Recruits have in Common with General Population

- Little attention to long-term consequences of behaviors.
  - At-risk for alcohol, tobacco & other substance abuse.
  - High rates of risky sexual behaviors.
- Susceptible to peer pressure.
- On arrival, suboptimal oral health.
- Heavier & less physically active than past cohorts.

RTC Tasks

- Must transform civilian volunteers into sailors.
- Instill Navy core values.
- Attitudes are acquired early in training & persist.
- Better job boot camp does, higher operational readiness of its graduates for operational fleet.
- Boot camp is asked to do it better, faster & at lower cost to taxpayers.
- Numerous obstacles to success.

BMC 1007 Provider Challenges

- **Numbers, numbers, numbers!**
- **Medical care competes with training time**
- **Most visits are for minor, non-emergent health symptoms.**
- **Variable motivations for recruits to return to training or avoid training; not easy to assess.**
- **Hard to keep providers (GMOs) intellectually challenged.**
- ***Interesting* cases go to hospital ER.**

DPR - Perceptions vs. Reality

- **Perception discrepancy between recruit & provider:**
  - **Sailor may think complaint is minimized**
  - **Provider may think complaint is dramatized or associated with ulterior motive**
- **High patient volume allows for little learning opportunity.**

Busiest BMC in the Navy

- **Following #'s are for BMC#1007 (excludes PT, podiatry, REU):**
  - **# of recruit visit/year:**
    - **2003 = 148,577**
    - **2004 = 144,494**
  - **Avg recruit visits/week:**
    - **2003 = 2,857**
    - **2004 = 2,779**
  - **Avg visits/recruit while at boot camp: 2.96**
  - **Top 5 reasons for sick call visits 2004 (out of 112,133 visits):**

    #1: Acute URI NOS (ICD-9 465.9) = 42,711 (38%)

    #2: Unspecified viral infections (ICD-9: 079.99) = 23,001 (21%)

    #3: Joint pain, lower leg pain, pain in limb (ICD-9: 719.46, 729.5) = 4,978 (4%)

    #4: Fever (ICD-9: 780.6) = 3,248 (3%)

    #5: Acute pharyngitis (ICD-9: 462) = 2,766 (2%)

An FYI: *Top Disqualifications from MEPS*

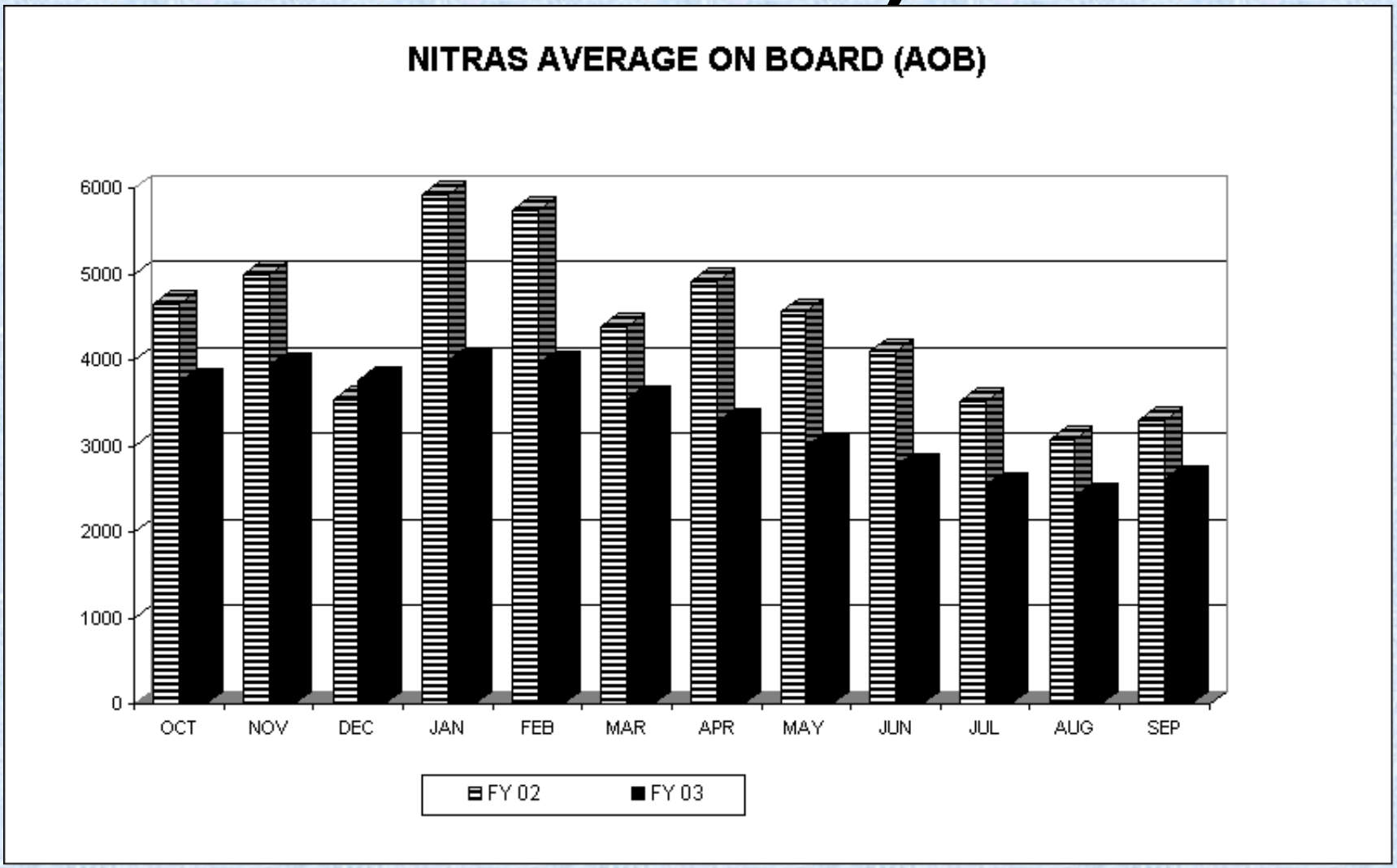
- Conditions screened out:
  - Asthma
  - Mental health
  - Hearing
  - M/S
  - BP
  - Vision
- Effective filter vs. sieve?

TRAINING SUPPORT CENTER

STRENGTH THROUGH TRAINING AND DISCIPLINE

- **TSC GL provides ~70% Surface Navy's initial technical training for numerous “A” schools.**
- **Diverse training programs.**
- **TSC annually has 14,139 students (FY-2003) →14,6767 (FY-2004); ~4,000 students onboard at any time.**

TSC (Training Services Command)



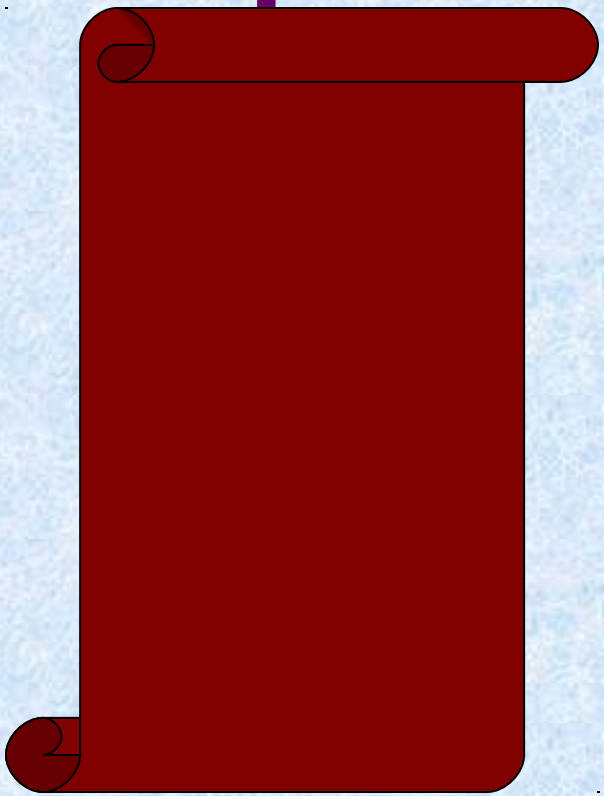
Naval Hospital Corps School Great Lakes, Illinois

- Training of 14wks duration.
- 60-75 students/class, ~75 classes/yr.
- Avg of 4,100 students/yr, expected to ↑to 4,500 (inc., dental).
- Avg on-board 1,200-1,500 at any time.
- 2 of 4 are old barracks; avg 3-4 students/room.
- Low attrition 9%/yr.
- Demanding training environment.

Some Current Medical Issues at RTC GL

- **Strep throat surveillance:**
  - **Rapid test vs. culture**
- **LTBI diagnosis:**
  - **TST vs. QuantiFERON-TB (QFT)/ QuantiFERON-TB Gold**
- **GBS**
- **TB (high vs. low infectivity)**
- **Adenovirus vaccine**
- **NC/VAMC & NHGL partnership**
- **TSC vs. training at fleet concentration areas**
- **Ongoing influenza campaign (FluMist & Fluzone), perhaps with an end in sight!**

Weekly Recruit & Student Healthcare Surveillance Report



NHGL Areas of Active Surveillance

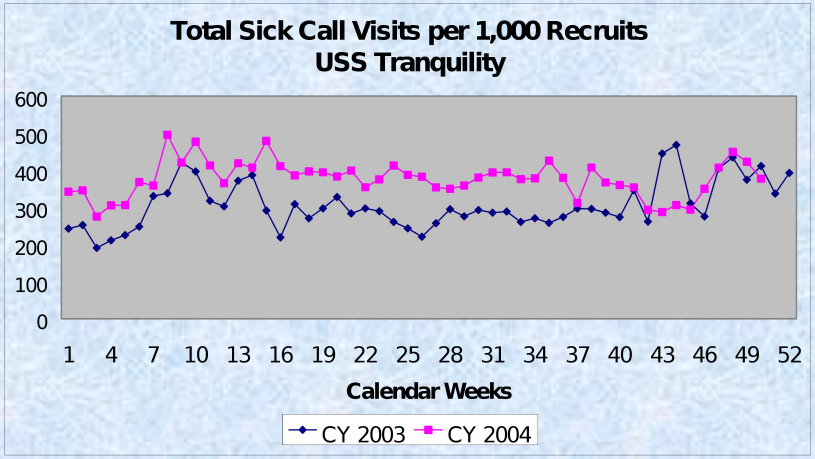
- **Strep throat**
- **Stress fractures**
- **MRSA**
- **Sick call visits**
- **TST reactors**
- **Ambulance runs**
- **Admissions**
- **Transfers**
- **Deaths**
- **Rhabdomyolosis**
- **GBS**
- **FRI**
- **STI’s (Ct, GC)**

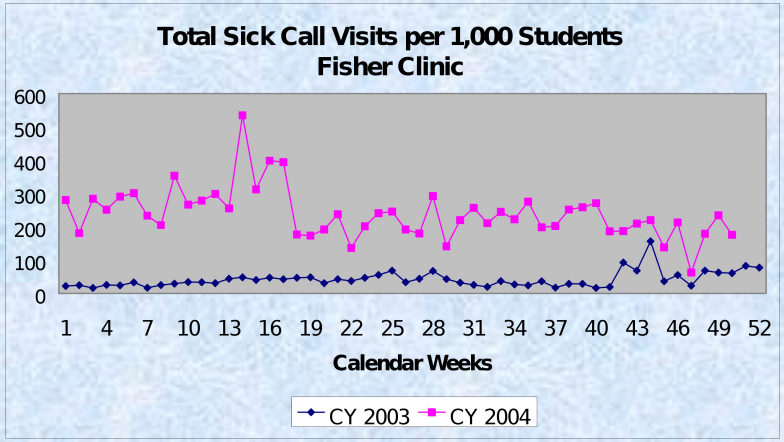
Recruit & Student Healthcare Surveillance Report, Great Lakes, IL Week of 13-19 Dec 2004 (Calendar week #50)

- **Recruit population:**
  - **Total recruit population:___**
  - **New recruits: ___**
- **Student population:**
  - **Total (exclusive of NHCS): ___**

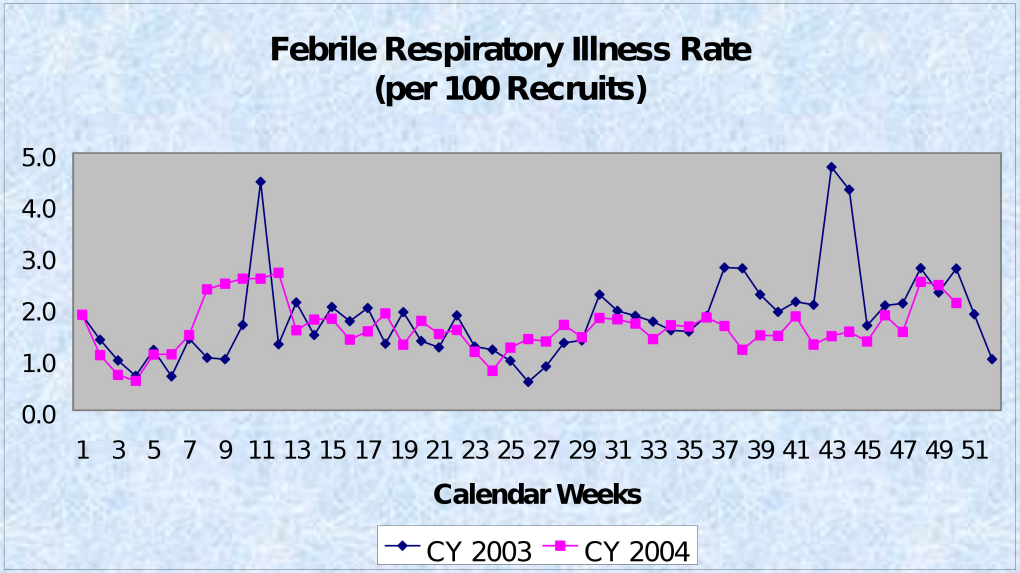
1. Total sick call visits (largely acute illn

Clinic	# Visits	Weekly Incidence
USS Tranquility	2,553	**377.16** / 1,000 Recruits
Fisher Clinic	752	**176.03** / 1,000 Students

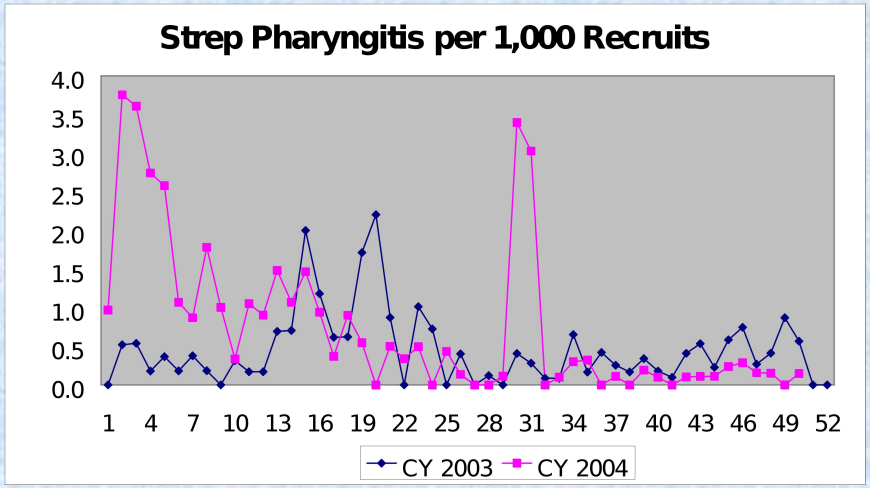


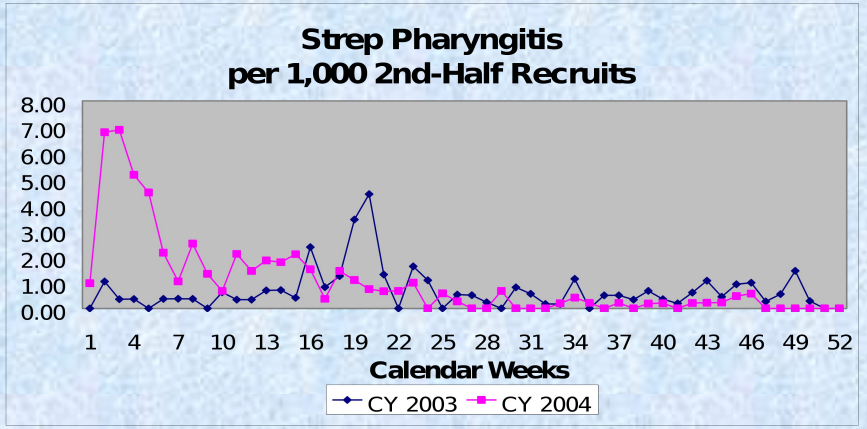


2. Febrile Respiratory Illness (FRI):

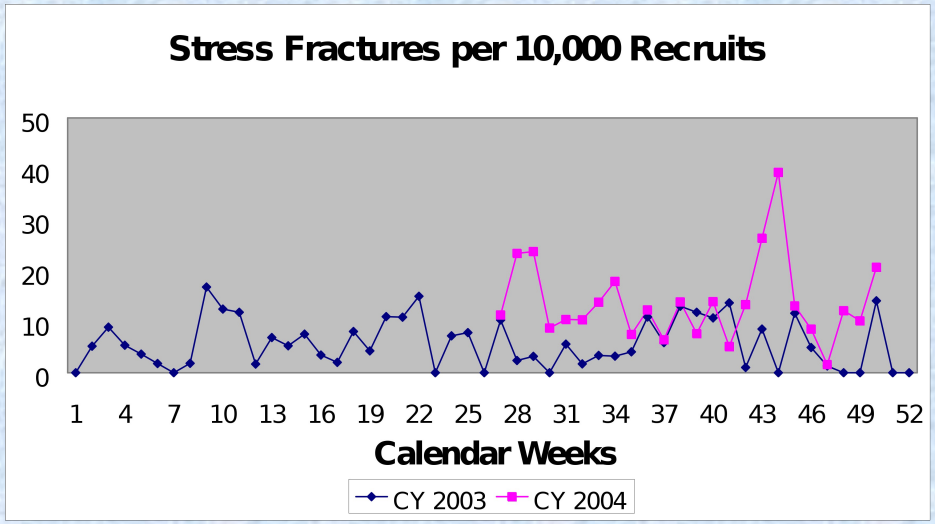


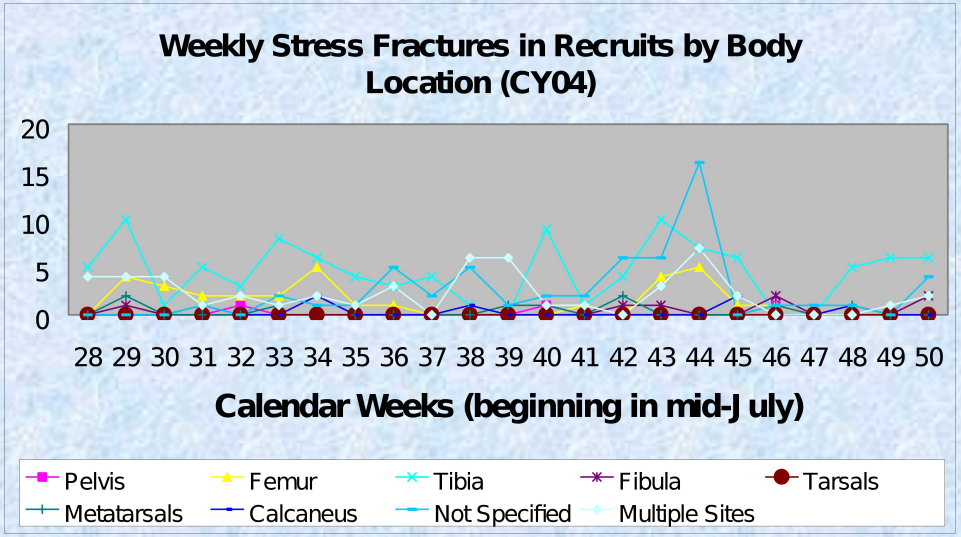
3. Strep Pharyngitis:



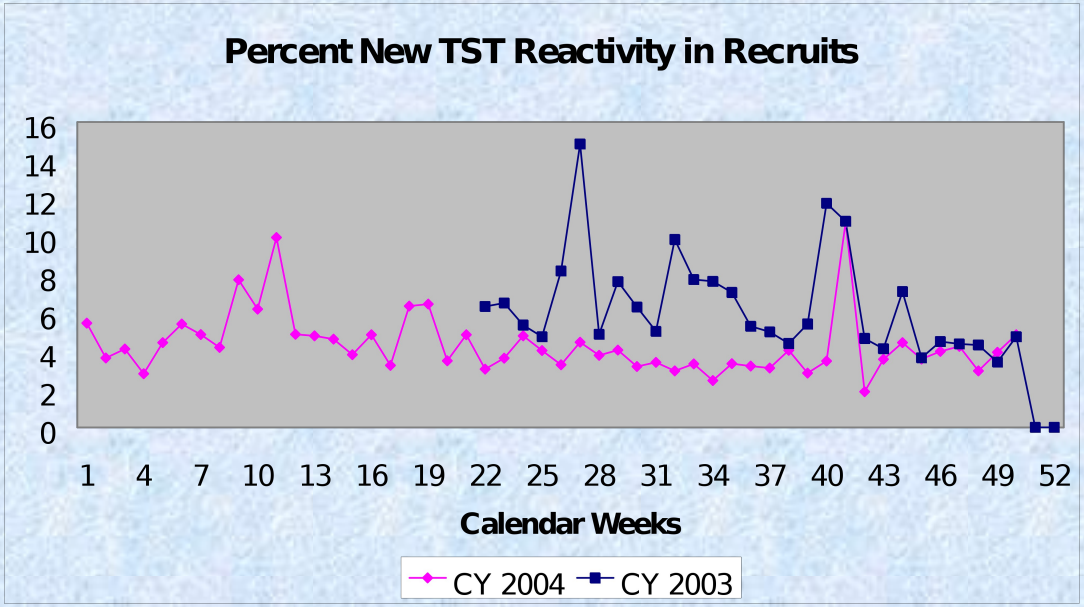


4. Stress Fractures



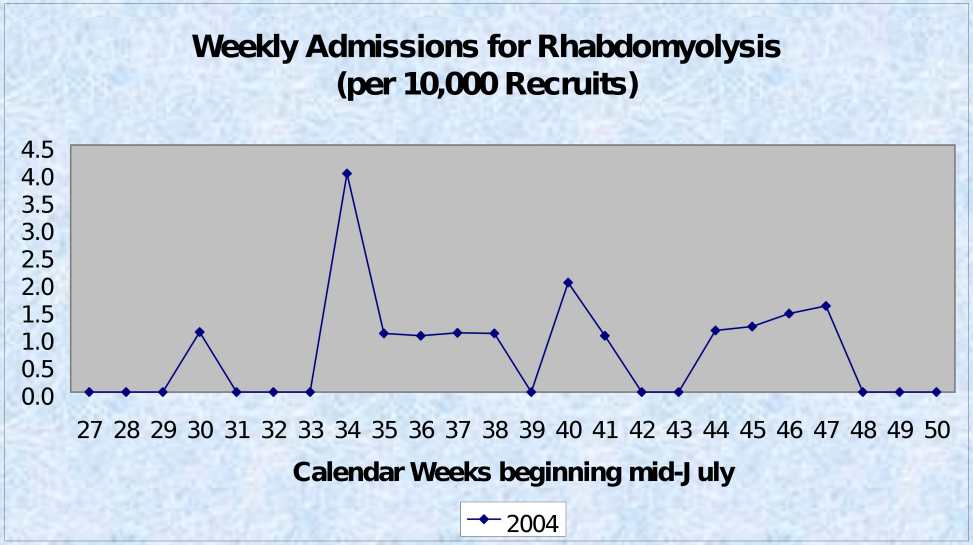


5. TB surveillance among recruits:



Calendar Week	New Recruits Tested	New (+) TST reactors	# (+) TSTs Foreign Born	TST Reactivity
50	948	46	25	4.85

6. Heat Stress/ Cold Stress/ Over-Exertion (inc., rhabdomyolysis) / Dehydration medical illnesses/injuries:



7. Ambulance Runs to NHGL 200-H:

Status	Runs	Reasons
Students	24	URI, M/S, AGE, etc
Recruits	40	M/S, bronchitis, UTI, etc.

8. Recruit hospitalizations (12):
NHGL (4): Pneumonia (1), etc.
NC/VAMC (8): Adjustment disorder (1), etc.

9. Student hospitalizations (2):
NHGL (1): Cellulitis (1), etc.
NC/VAMC (1): PD (1)

10. Transfers to other institutions (0):

11. Significant infections:
Recruits/Students: MRSA (Methicillin-Resistant Staph Aureus) only.
MRSA wound infections:
Recruits (1): site unspecified (1)
Students (2): abdominal wound (1), etc.

12. Suspected outbreaks: F/U on suspected FBI done.

13. Patients with fever, generalized vesicular or pustular rash (GFVPRI): None

14. Notable events & comments:
Influenza remains at *sporadic level* in most states.

15. General comments & other remarks:
The points of contact for questions or comments are CAPT Jesse Monestersky (jesse.monestersky@nhgl.med.navy.mil) & LCDR Michael B. Jacobs (michael.jacobs@nhgl.med.navy.mil). Thank you for your continued interest.

Submitted by OH/PMD on 23 Dec 2004

Recruit Medicine Literature Review

Representative References

- Drehner, D; KM Neuhauser, TS Neuhauser, GV Blackwood: *Death Among US Air Force Basic Trainees, 1956 to 1996.* Military Medicine 164(12):841-847, Dec 1999.
- Mittelman, M; J Bayer, S Plunkett: *Total Navy Recruit Health: Making Our Sailors Fit for the Fleet*. Military Medicine 163(2):98-101, Feb 1998.
- Shaffer, RA; SK Brodine, SI Ito, AT Le: *Epidemiology of Illness & Injury Among US Navy & Marine Corps Female Training Populations.* Military Medicine 164(1):17-21, Jan 1999.
- Scoville, SL; JW Gardner, RN Potter: *Traumatic Deaths During US Armed Forces Basic Training, 1997-2001.* American Journal of Preventive Medicine 26(3):250-251, Apr 2004.

Concluding Remarks

- NHGL PMO/Epi position provides an interesting mix of professional experiences, inc., with recruits & students, staff & beneficiaries.
- RTC is only recruit boot camp for Navy.
- PMO position at NHGL will remain after NHGL/VAMC consolidation
- Consider position at GL if want challenging position with potential for research.
- GL is well kept secret; Chicago, northern suburbs, SE WI, nice place to call home.

DISCUSSION & QUESTIONS??